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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/614,624	/614,624 07/05/2003 Jeffrey W. Stevens		3003.001	7850
75	590 09/27/2006	(alo	EXAM	NER
Andrea L. Ma	ys, Esq.	The state of the s	VERBITSKY, G	AIL KAPLAN
Law Office of A	Andrea L. Mays	(OC)	ART UNIT	PAPER NUMBER
Placitas, NM	87043-1337	10 2006 B)	2859	
		E Para State	DATE MAILED: 09/27/2006	5

Please find below and/or attached an Office communication concerning this application or proceeding.

		Ар	oplication No.		Applicant(s)	
	Office Action Commence	10	0/614,624		STEVENS ET AL.	
	Office Action Summary	Ex	caminer		Art Unit	
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Period fo	- The MAILING DATE of this communic r Reply	cation appears	s on the cover	sheet with the co	orrespondence ad	dress
WHIC - Exter after - If NO - Failu Any r	CRTENED STATUTORY PERIOD FOR HEVER IS LONGER, FROM THE MANISIONS of time may be available under the provisions of SIX (6) MONTHS from the mailing date of this communication for reply is specified above, the maximum state to reply within the set or extended period for reply epply received by the Office later than three months afted patent term adjustment. See 37 CFR 1.704(b).	AILING DATE of 37 CFR 1.136(a). unlcation. tutory period will app will, by statute, caus	OF THIS CO In no event, howe only and will expire see the application to	MMUNICATION ver, may a reply be tim siX (6) MONTHS from to become ABANDONED	l. ety filed the mailing date of this c O (35 U.S.C. § 133).	
Status						
1)	Responsive to communication(s) file	d on				•
•	•		tion is non-fina	al.		
3)	Since this application is in condition if					e merits is
	closed in accordance with the practic	e under Ex pa	arte Quayle, 1	935 C.D. 11, 45	3 O.G. 213.	
Dispositi	on of Claims					
	4)⊠ Claim(s) <u>1-29</u> is/are pending in the application.					
	4a) Of the above claim(s) is/ar	e withdrawn f	from consider	ation.		
•	Claim(s) is/are allowed.					
•	Claim(s) <u>1-29</u> is/are rejected.					
	Claim(s) is/are objected to.	tion and/a-al-	lastica require	ment		
8)∐	Claim(s) are subject to restric	uon and/or ele	ecnon require	men.		
Applicat	ion Papers					
	The specification is objected to by the		_			
10)	The drawing(s) filed on is/are:					
	Applicant may not request that any object					NED 4 404/-1
	Replacement drawing sheet(s) including					
11)[_]	The oath or declaration is objected to	by the Exam	niner. Note the	e attached Office	Action of form.P	10-132.
Priority (under 35 U.S.C. § 119					
	12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:					
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3) 🛛 Infor	rmation Disclosure Statement(s) (PTO/SB/08) er No(s)/Mail Date <u>07/05/03</u> .	. • • •• •	· ===	Notice of Informal I		

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DETAILED ACTION DETAILED ACTION

Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 1, 12-13, 17-18, 20, 22, 25, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss et al. (U.S. 6917891) in view of Boldt (U.S. 5723847).

Rothfuss discloses in Fig. 1 a device/ method for determining time remaining for fluid flow (until shut down) in a direction (inlet/ outlet) through a pipe, the device comprising a sensor (outlet sensor) 122 and a sensor (inlet sensor) 120 for sensing a parameter of the fluid; means (controller) for comparing data of the two sensors in a communication (link/ hardwire) with the sensors, and issuing an indication of a time remaining based upon the comparison and a warning signal.

Rothfuss teaches all the subject matter claimed by applicant, however, Rothfuss does not explicitly states that the parameter is temperature and, thus, the sensors are the temperature sensors, as stated in claims 1, 17, with the remaining limitations of claims 1, 12-13, 17-18, 20, 22, 25, 29.

Boldt discloses a device in the field of applicant's endeavor wherein the fluid/ water parameter is temperature, and at least one temperature sensor is a temperature sensor, and the temperature data is used for determining and displaying a remaining time for fluid flow (until shut down). Application/Control Number: 10/614,624 Page 3

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Rothfuss, so as to determined the remaining time based on the data from the temperature sensors, as taught by Boldt, since both the sensors of Rothfuss and the sensors of Boldt could be used to determine the remaining time, if one is replaced with another, and because Rothfuss suggests that any fluid parameter could be measured, thus, Rothfuss does not teach away from using temperature sensors.

3. Claims 2-3, 7, 12-14, 19, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Smith (U.S. 4471354).

Rothfuss and Boldt disclose the device/ method as stated above.

They do not teach the limitations of claims 2-3, 7, 12-14, 19, 21, 23.

Smith discloses a device for remotely measuring temperature by using RF transmitter (wireless/ RF communication link) comprising a housing, inherently, for protection from an environment, a display, a power supply, as shown in Figs. 1-2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Rothfuss and Boldt, so as to have first or second sensor in a housing, power supply and a display, and capable to wirelessly transmit temperature data by RF to a host device, as taught by Smith, so as to allow the operator to both, obtain a visual data when the operator in the vicinity of the device, and when the operator is not in the premises, so as to continuously provide the operator with temperature data.

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Claims 6, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over 4. Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Giardina (U.S. 4773023).

Rothfuss and Boldt disclose the device/ method as stated above.

They do not teach the limitations of claims 6, 10.

Giardina discloses in Fig. 1 a device in the field of applicant's endeavor comprising two temperature sensors located in upstream (fluid source) and downstream (outlet). The sensors can be thermocouples.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensors of Rothfuss and Boldt with temperature sensors, such as thermocouples, as taught by Giardina, because thermocouples are known to measure flowing fluid parameters and will perform the same function of measuring flowing fluid parameters if the sensors of are replaced with the thermocouples.

Claims 4, 6, 8, 10, 16, 27-28 are rejected under 35 U.S.C. 103(a) as being 5. unpatentable over Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Giardina (U.S. 4773023) and Huang (U.S. 5535779).

Rothfuss and Boldt disclose the device/ method as stated above.

They do not teach the limitations of claims 4, 6, 8, 10, 16, 27-28.

Giardina discloses in Fig. 1 a device in the field of applicant's endeavor comprising two temperature sensors located in upstream (fluid source) and downstream (outlet). The sensors (first and second) can be thermocouples. Also, Giardina teaches

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that a communication link is a hardwire communication link, as shown in Fig. 1. The controller is a microprocessor 22, which compared (determines the difference between) the two thermocouples and issues a power signal corresponding to the difference (col. 1, lines 44-60). The device also comprises an alarm signal. In addition, Giardina measures a rate of change in temperature.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensors of Rothfuss and Boldt with temperature sensors, such as thermocouples, as taught by Giardina, because thermocouples are known to measure flowing fluid parameters and will perform the same function of measuring flowing fluid parameters if the sensors of are replaced with the thermocouples.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication link, disclosed by Rothfuss and Boldt with the hardwire communication link, as taught by Giardina, because both of these communication links are alternate types of the communication links, and will perform the same function, of transmitting thermally responsive data to a host, as very well known in the art, if one is replaced with the other.

Huang teaches that an alarm in a water outlet can be an audio alarm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the alarm, disclosed by Rothfuss and Boldt, so as to have an audio alarm, as taught by Huang, so as to draw the operator's attention when the operator does not look directly at the device.

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6. Claim 15, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Grimes et al. (U.S. 6639402).

Rothfuss and Boldt disclose the device/ method as stated above.

They do not teach the audio display.

Grimes teaches that a display can be an audio display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display, disclosed by Rothfuss and Boldt, so as to have an audio display, as taught by Grimes, so as to draw the operator's attention when the operator does not look directly at the display.

7. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Immel (U.S. 6595005).

Rothfuss and Boldt disclose the device/ method stated above.

They do not teach that the temperature sensor (first) is an IC temperature sensor.

Immel teaches that parameter (temperature) of a flowing fluid could be obtained by integrated temperature sensor, thermocouple, etc.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the first temperature sensor of Rothfuss and Boldt with a temperature sensor, such as a thermocouple, as taught by Immel, because thermocouples are also known to measure flowing fluid parameters and will perform the

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same function of measuring flowing fluid parameters if the (first) sensor of Rothfuss and

Boldt is replaced with the thermocouple.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the first temperature sensor of Rothfuss and Boldt with a temperature sensor, such as integrated circuit temperature sensor, as taught by Immel, because integrated circuit sensors are also known to measure flowing fluid parameters and will perform the same function of measuring flowing fluid parameters if the (first) sensor of Rothfuss and Boldt is replaced with the integrated circuit temperature sensor.

8. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Immel (U.S. 6595005).

Rothfuss and Boldt disclose the device/ method stated above.

They do not teach that the temperature sensor (second) is an IC temperature sensor.

Immel teaches that parameter (temperature) of a flowing fluid could be obtained by integrated temperature sensor, thermocouple, etc.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the first temperature sensor of Rothfuss and Boldt with a temperature sensor, such as a thermocouple, as taught by Immel, because thermocouples are also known to measure flowing fluid parameters and will perform the

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same function of measuring flowing fluid parameters if the (second) sensor of Rothfuss and Boldt is replaced with the thermocouple.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the second temperature sensor of Rothfuss and Boldt with a temperature sensor, such as integrated circuit temperature sensor, as taught by Immel, because integrated circuit temperature sensors are also known to measure flowing fluid parameters and will perform the same function of measuring flowing fluid parameters if the (second) sensor of Rothfuss and Boldt are replaced with the integrated circuit temperature sensor.

9. Claims 2-3, 7, 11, 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt (U.S. 5723847) as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Kinzel (U.S. 6624760).

Rothfuss and Boldt disclose the device/ method as stated above.

They do not explicitly teach the limitations of claims 2-3, 7, 11, 19-23.

Kinzel discloses in Figs. 1-2 a device comprising two or more status sensors (could be thermal sensors, col. 4, line 20) 13 comprising transceivers 27 enable them two-way RF communication with host. The sensors have housing, power supply (battery), and transceiver in the housing, as shown in Fig. 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Rothfuss and Boldt, so as to have wireless/ RF communication link with sensors (first and second) comprising transceivers, as taught by Kinzel, so as to enable the device to communicate data to a

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remotely located operators and to receive commands from the operator, as it is very well known in the art.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt (U.S. 5723847) as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Clark et al. (U.S. 4850717) [hereinafter Clark].

Rothfuss and Boldt disclose the device/ method as stated above.

They do not explicitly teach a sleeve for the housing, as stated in claim 8.

Clark discloses a device in the field of applicant's endeavor wherein a temperature-sensing device is located in the housing, and the housing is over fitted with a protective sleeve to protect the housing from harsh corrosive environment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Rothfuss and Boldt so as to over fit the housing with a protective sleeve, as taught by Clark, in order to protect it from harsh corrosive environment and such to extend the housing's life.

11. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rothfuss and Boldt as applied to claims 1, 12-13, 17-18, 20, 22, 25, 29 above, and further in view of Wallace, Jr. (U.S. 6349269) [hereinafter Wallace].

Rothfuss and Boldt disclose the device/ method as stated above.

They do not explicitly teach the limitations of claim 26.

Wallace teaches a device/ method for determining a time remaining comprising taking a first temperature measurement by a temperature sensor, taking a second temperature measurements by the (same) temperature sensor, then taking a difference

measurement would be a latter one in time.

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between (comparing) said two temperature measurements by the temperature sensor. It is inherent, that in this case, one measurement would be first in time and another

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device/ method disclosed by Rothfuss and Boldt, so as to take two temperature measurement in time, as taught by Wallace, so as to determine time remaining, in order to minimize the number of sensors, and thus, to simplify the maintenance of the device.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800

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September 11, 2006

07/05/03

Express Mail Label Number: EU780973523US

PTO/SB/08A (04-03) Approved for use through 04/30/2003, OMB 0551-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Complete If Known Substitute for form 1449/PTO Application Number 10614624 Filing Date July 5, 2003 INFORMATION DISCLOSURE Jeffrey W. Stevens First Named Inventor STATEMENT BY APPLICANT Art Unit (Use as many sheets as necessary) Examiner Name Verlu 3003.001 Sheet 1 of 2 Altomey Docket Number

			U. S. PATENT	DOCUMENTS	
Examiner Initiats*	Cite No.	Document Number Number-Kind Code ^{1 (Filmont)}	Publication Date MM-00-YYYY	Name of Patentee or Applicant of Cited Document	Peges, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
61)	/	US- 5,868,311	2-9-99	Cretu-Petra	
		^{US-} 6,286,764 B1	9-11-01	Garvey et al.	
1		US- 6,029,094	2-22-00	Diffut	
1		US- 4,682,728	7-28-87	Oudenhoven et al.	
		^{US-} Re. 35,018	8-15-95	Homan	
1		^{US-} 6,059,192	5-9-00	Zosimadis	
		US- 4,420,811	12-13-83	Tamay et al.	
T		US- 4,563,780	1-14-86	Pollack	
		^{US-} 5,358,177	10-25-94	Cashmore	
		US- 6,282,370 B1	8-28-01	Cline et al.	
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		^{US-} 4,931,938	6-5-90	Hass	
	·	^{US-} 4,974,636	12-4-90	Cogger	
		US- 5,050,062	9-17-91	Hass	
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		^{US-} 5,944,255	8-31-99	Shirmohamadi	
7		^{US-} 5,504,950	4-9-96	Natalizia et al.	
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	FORE	IGN PATENT DOCU			
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at www.usmto.gov or MPEP 901.04. Enter Office that issued the document, by the two-leafier code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperer must precede the serial number of the patent document. Kind of document by the expenditude on the document under WIPO Standard ST. 16 if possible. Applicant is to piace a check mark here if English language Translation is attached.

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PTO/SB/08A (04-03)

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Substitute for form 1449/PTO	ed to respond to a collection of information unless it contains a valid OMB contro Complete if Known				
	Application Number	10614624			
INFORMATION DISCLOSURE	Filing Date	10614629			
	First Named Inventor	Jeffrey W. Stevens			
STATEMENT BY APPLICANT	Art Unit				
(Use as many sheets as necessary)	Examiner Name				
Sheet 2 of 2	Attorney Docket Number	3003.001			

			U. S. PATENT	DOCUMENTS
Examiner initials*	Cite No.1	Document Number Number-40nd Code ^{2 (Flavors)}	Publication Date MM-DD-YYYY	Name of Patentee or Pages, Columns, Lines, When Applicant of Cited Document Relevant Passagas or Relevan Figures Appear
Ca	7	^{US-} 4,945,943	8-7-90	Cogger
		^{US-} 4,756,030	7-12-88	Juliver
		US- 4,700,884	10-20-87	Barrett et al.
		^{US-} 6,202,980 B1	3-20-01	Vincent et al.
ter		^{US-} 6,250,558 B1	6-26-01	Dogre Cuevas
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form end/or suggestions for reducing this burden, should be sent to the Chief information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	Α	US-6,349,249	02-2002	Cunningham, Peter D.	701/28
*	В	US-6,471,395	10-2002	Buhl et al.	374/29
*	С	US-6,241,383	06-2001	Feller et al.	374/40
*	D	US-6,917,891	07-2005	Rothfuss et al.	702/100
*	E	US-4,485,449	11-1984	Knauss, Uwe	702/46
*	F	US-6,481,287	11-2002	Ashworth et al.	73/597
*	G	US-4,773,023	09-1988	Giardina, Joseph J.	702/45
*	н	US-5,615,733	04-1997	Yang, Ming-Chia	165/11.1
*	1	US-4,471,354	09-1984	Smith, Robert B.	340/870.17
*	J	US-5,535,779	07-1996	Huang, Lung-Shen	137/559
*	К	US-6,595,005	07-2003	Immel, Eric	62/3.7
*	L	US-6,058,774	05-2000	Rengshausen, Detlef	73/204.24
*	М	US-6,624,760	09-2003	Kinzel et al.	340/870.11

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NON-PATENT DOCUMENTS

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A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)

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Applicant(s)/Patent Under Application/Control No. Reexamination 10/614,624 STEVENS ET AL Notice of References Cited Examiner Art Unit Page 2 of 2 2859 Gail Verbitsky **U.S. PATENT DOCUMENTS** Document Number Country Code-Number-Kind Code Date Classification Name MM-YYYY 702/132 Wallace, Jr., Douglas E. 02-2002 US-6.349.269 10-2002 324/209 Grimes et al. US-2002/0153882 В 374/135 02-1991 Byles, Joe D. US-4,991,976 С 374/110 03-1999 US-5,879,082 Smitherman et al. D 374/44 09-1994 Hori et al. US-5,348,394 E 09-2001 236/12.12 US-6,286,764 Garvey et al. F US-G н US-US-Τ บร-USκ US-US-М FOREIGN PATENT DOCUMENTS Date **Document Number** Name Classification Country Country Code-Number-Kind Code MM-YYYY N 0 Р Q R s Т **NON-PATENT DOCUMENTS** Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)

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